

Amendment to the Claims

In the Claims:

Please cancel Claims 25, 26, 64, 65, 67-69, 72-74, and 77-87.

Please amend Claims 24, 50, 53, 54, 60, 61, 66, 75, and 88; and add new Claim 93, as follows:

1-23. (Cancelled)

24. (Currently Amended) A videoendoscopic surgery trainer for the practice of videoendoscopic surgery techniques, the trainer comprising:

(a) a housing defining a practice volume;

(b) a digital video camera disposed within the practice volume, the digital video camera being configured to capture a plurality of frames per second, such that the digital video camera can provide a digital video feed of at least a portion of the practice volume; and

(c) a support structure comprising:

(i) an elongate member, the elongate member having a proximal end disposed outside of the practice volume, and a distal end disposed inside the practice volume, the digital video camera being coupled with the distal end of the elongate member, such that manually changing a position of the proximal end of the elongate member results in a change in a position of the digital video camera, the elongate member movably supporting the digital video camera externally of the elongate member;

(ii) a first adjustable bracket configured to slidably engage the first elongate member, such that an amount of the first elongate member disposed within the practice volume can be increased and decreased as desired;

(iii) a second adjustable bracket configured to movably support the first elongate structure, to enable a position of digital video camera coupled to the distal end of the elongate member to be tilted; and

(iv) a support member configured to support the second adjustable bracket and to pivotably engage the housing, the support member having a proximal end disposed inside the practice volume, to enable a position of digital video camera coupled to the distal end of the elongate member to be panned.

25. (Canceled)

26. (Canceled)

27-48. (Canceled)

49. (Previously Presented) The videoendoscopic surgery trainer of Claim 24, wherein the digital video camera is substantially larger than a smallest incision that would be required to insert a laparoscope into a body of a patient.

50. (Currently Amended) A videoendoscopic surgical trainer for practicing videoendoscopic surgical techniques, comprising:

(a) a housing defining a practice volume;

(b) a digital imaging sensor configured to obtain an image of at least a portion of the practice volume and to output a corresponding signal that can be used to generate a video signal to drive a display;

(c) a boom configured to support and position the digital imaging sensor, such that a position of the digital imaging sensor can be changed with the boom to obtain an image of a different portion of the practice volume, the boom having a proximal end disposed outside of the practice volume, and a distal end disposed inside the practice volume, the digital imaging sensor being coupled with the distal end of the boom, such that manually changing a position of the proximal end of the boom results in a change in a position of the digital imaging sensor; and

(d) a support member configured to ~~slidingly~~ pivotaly engage the housing, thereby enabling digital imaging sensor to be selectively positioned within the practice volume to achieve a panning motion. and to positionably support the boom, thereby enabling the digital imaging sensor to be further selectively positioned within the practice volume.

51. (Previously Presented) The videoendoscopic surgical trainer of Claim 50, wherein the support member is further configured to slidingly engage the boom, such that an extent by which the boom extends within the practice volume is selectively variable by sliding the boom relative to the support member.

52. (Previously Presented) The videoendoscopic surgical trainer of Claim 51, wherein the boom extends from the support member into the practice volume at a substantially non-normal angle.

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53. (Currently Amended) The videoendoscopic surgical trainer of Claim 50, wherein the support member is configured to enable the digital imaging sensor to be moved in ~~at least one of:~~

(a) ~~a panning motion; and~~

(b) a tilting motion.

54. (Currently Amended) The videoendoscopic surgical trainer of Claim 50, wherein said support ~~mechanism~~ member comprises:

(a) a first adjustable member configured to enable an extent to which the boom extends within the practice volume to be selectively controlled; and

(b) a second adjustable member configured to enable a position of the digital imaging sensor within the practice volume to be selectively changed, without also changing the extent to which the boom extends into the practice volume.

55. (Previously Presented) The videoendoscopic surgical trainer of Claim 50, wherein the support member comprises a first portion and a second portion, such that the first portion pivotally engages the second portion, thereby enabling a position of the distal end of the support member within the practice volume to be selectively adjustable.

56. (Previously Presented) The videoendoscopic surgical trainer of Claim 50, wherein the proximal end of the boom comprises a handle configured to simulate a handle of a generally conventional laparoscope.

57. (Previously Presented) The videoendoscopic surgical trainer of Claim 50, wherein the boom includes a hollow shaft configured to receive electrical leads coupling the digital imaging sensor to at least one of:

(a) a display; and

(b) a processor configured to generate a signal usable to drive a display.

58. (Previously Presented) The videoendoscopic surgical trainer of Claim 50, wherein the digital imaging sensor is capable of capturing at least thirty frames per second.

59. (Previously Presented) The videoendoscopic surgical trainer of Claim 50, wherein the digital imaging sensor comprises a web camera.

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60. (Currently Amended) A portable videoendoscopic surgical trainer for practicing videoendoscopic surgical techniques, comprising:

(a) a housing defining a practice volume, the housing comprising a collapsible frame, the frame defining a plurality of side openings facilitating access to the practice volume; and

(b) a digital video camera disposed within the practice volume, the digital video camera producing a digital video signal conveying images of at least a portion of the practice volume, the digital video camera being movable within the practice volume, such that a position of the digital video camera can be changed to obtain an image of a different portion of the practice volume, wherein the digital video camera is substantially larger than a smallest incision that would be required to insert a laparoscope into a body of a patient; and

(c) a support structure movably supporting the digital video camera without substantially enveloping the digital video camera, thus enabling the digital video camera to be movably positioned within the practice volume to change a position of the digital video camera so as to obtain an image of a different portion of the practice volume.

61. (Currently Amended) A videoendoscopic surgical trainer for practicing videoendoscopic surgical techniques, comprising:

(a) a housing defining a practice volume;

(b) a digital video camera disposed within the practice volume, the digital video camera producing a digital video signal conveying images of at least a portion of the practice volume; and

(c) a support structure disposed within the practice volume, the support structure being supported by a base of the housing, the digital video camera being coupled to and supported by the support structure, the support structure enabling the digital video camera to be movably positioned within the practice volume to change a position of the digital video camera so as to obtain an image of a different portion of the practice volume, the support structure movably supporting the digital video camera without substantially enveloping the digital video camera.

62. (Previously Presented) The videoendoscopic surgical trainer of Claim 61, wherein the digital video camera is substantially larger than a smallest incision that would be required to insert a laparoscope into a body of a patient.

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63. (Previously Presented) The videoendoscopic surgical trainer of Claim 61, wherein the support structure includes at least one of a ball head that enables the digital video camera to pan and tilt, and a pan and tilt head.

64. (Canceled)

65. (Canceled)

66. (Currently Amended) The videoendoscopic surgical trainer of ~~Claim 65~~ Claim 61, ~~wherein the proximal end of the elongate member comprises~~ further comprising a handle configured to simulate a handle of a ~~generally conventional~~ laparoscope, an electrical conductor from the digital video camera passing through the handle and extending to at least one of a display and a processor configured to process images provided by the digital video camera.

67.-69. (Canceled)

70. (Previously Presented) The videoendoscopic surgical trainer of Claim 61, wherein the housing comprises a replaceable top panel.

71. (Previously Presented) The videoendoscopic surgical trainer of Claim 61, wherein the digital video camera comprises a web camera.

72.-74. (Canceled)

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75. (Currently Amended) A videoendoscopic surgical training system for practicing videoendoscopic surgical techniques, comprising:

(a) a housing defining a practice volume and including an orifice disposed on an upper surface of the housing;

(b) a digital image sensor disposed within the practice volume, the digital image sensor producing a digital video signal conveying images of at least a portion of the practice volume; and

(c) a support structure configured to support and position the digital image sensor, such that a position of the digital image sensor can be changed to obtain an image of a different portion of the practice volume, ~~the support structure movably supporting the digital image sensor so that the digital image sensor is substantially external to the support structure~~ a distal end of the support structure comprising a shaft configured to engage the orifice on the upper surface of the housing, the support structure further comprising an elongate member, the elongate member having a proximal end disposed outside of the practice volume, and a distal end disposed inside the practice volume, the digital image sensor being coupled with the distal end of the elongate member, such that manually changing a position of the proximal end of the elongate member results in a change in a position of the digital image sensor, the elongate member movably supporting the digital image sensor externally of the elongate member;

~~(d) a signal processor configured to receive and process the digital video signal from the digital image sensor to provide a display video signal that conveys the images; and~~

~~(e) a display for displaying the images conveyed by the display video signal.~~

76. (Previously Presented) The videoendoscopic surgical training system of Claim 75, wherein the digital image sensor is substantially larger than a smallest incision that would be required to insert a laparoscope into a body of a patient.

77.-87. (Canceled)

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1 88. (Currently Amended) A method for using an imaging device to enhance a session of
2 endoscopic skills training, comprising the steps of:

3 (a) introducing at least one exercise object into a practice volume of a surgical
4 trainer;

5 (b) using the imaging device to produce a signal conveying images of the at least
6 one exercise object from a first position within the surgical trainer, wherein the imaging device is
7 substantially larger than a distal end of a conventional laparoscope, such that the imaging device is
8 too large to pass through an incision used to introduce such a conventional laparoscope into a patient;

9 (c) displaying the images of the at least one exercise object conveyed by the signal
10 in regard to the first position;

11 (d) ~~manipulating~~ adjusting a first bracket and a second bracket in order to
12 manipulate a boom that movably supports the imaging device at a distal end of the boom, so that the
13 imaging device produces a signal conveying images of the at least one exercise object from a second
14 position within the surgical trainer; and

15 (e) displaying the images of the at least one exercise object conveyed by the signal
16 in regard to the second position.

17 89. (Previously Presented) The method of Claim 88, wherein the step of manipulating the
18 boom further comprises the step of locking the boom once the imaging device is positioned to
19 produce the signal conveying images of the simulated anatomical structure from the second position,
20 to prevent undesired further movement of the imaging device.

21 90. (Previously Presented) The method of Claim 88, further comprising the step of
22 transmitting data over a network that can be used to display images collected by the imaging device.

23 91. (Previously Presented) The method of Claim 88, further comprising the step of storing
24 data that are usable to display images collected by the imaging device after the session is complete.

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1 92. (Previously Presented) The method of Claim 88, wherein the step of manipulating the
2 boom further comprises at least one of the steps of:

3 (a) zooming the imaging device closer to the at least one exercise object, to move
4 the imaging device from the first position to the second position;

5 (b) zooming the imaging device farther from the at least one exercise object, to
6 move the imaging device from the first position to the second position;

7 (c) panning the imaging device to move the imaging device from the first position
8 to the second position; and

9 (d) tilting the imaging device to move the imaging device from the first position to
10 the second position.

11 93. (New) A videoendoscopic surgical trainer for practicing videoendoscopic surgical
12 techniques, comprising:

13 (a) a housing defining a practice volume;

14 (b) a digital video camera disposed within the practice volume, the digital video
15 camera producing a digital video signal conveying images of at least a portion of the practice volume;

16 (c) a handle configured to simulate a handle of a laparoscope, the handle
17 extending outwardly and away from the frame; and

18 (d) an electrical conductor extending from a distal end of the handle to the digital
19 video camera, and extending from a proximal end of the handle to least one of a display and a
20 processor configured to process images provided by the digital video camera.